

```

1
ACTGCAACCCCTAATCAGAGCCCAA      met ala gln trp glu met leu gln
ATG GCG CAG TGG GAA ATG CTG CAG

10                                20
asn leu asp ser pro phe gln asp gln leu his gln leu tyr ser
AAT CTT GAC AGC CCC TTT CAG GAT CAG CTG CAC CAG CTT TAC TCG

30
his ser leu leu pro val asp ile arg gln tyr leu ala val trp
CAC AGC CTC CTG CCT GTG GAC ATT CGA CAG TAC TTG GCT GTC TGG

40                                50
ile glu asp gln asn trp gln glu ala ala leu gly ser asp asp
ATT GAA GAC CAG AAC TGG CAG GAA GCT GCA CTT GGG AGT GAT GAT

60
ser lys ala thr met leu phe phe his phe leu asp gln leu asn
TCC AAG GCT ACC ATG CTA TTC TTC CAC TTC TTG GAT CAG CTG AAC

70                                80
tyr glu cys gly arg cys ser gln asp pro glu ser leu leu leu
TAT GAG TGT GGC CGT TGC AGC CAG GAC CCA GAG TCC TTG TTG CTG

90
gln his asn leu arg lys phe cys arg asp ile gln pro phe ser
CAG CAC AAT TTG CGG AAA TTC TGC CGG GAC ATT CAG CCC TTT TCC

100                                110
gln asp pro thr gln leu ala glu met ile phe asn leu leu leu
CAG GAT CCT ACC CAG TTG GCT GAG ATG ATC TTT AAC CTC CTT CTG

120
glu glu lys arg ile leu ile gln ala gln arg ala gln leu glu
GAA GAA AAA AGA ATT TTG ATC CAG GCT CAG AGG GCC CAA TTG GAA

130                                140
gln gly glu pro val leu glu thr pro val glu ser gln gln his
CAA GGA GAG CCA GTT CTC GAA ACA CCT GTG GAG AGC CAG CAA CAT

150
glu ile glu ser arg ile leu asp leu arg ala met met glu lys
GAG ATT GAA TCC CGG ATC CTG GAT TTA AGG GCT ATG ATG GAG AAG

160                                170
leu val lys ser ile ser gln leu lys asp gln gln asp val phe
CTG GTA AAA TCC ATC AGC CAA CTG AAA GAC CAG CAG GAT GTC TTC

180

```

Figure 1A

cys phe arg tyr lys ile gln ala lys gly lys thr pro ser leu
 TGC TTC CGA TAT AAG ATC CAG GCC AAA GGG AAG ACA CCC TCT CTG
 190 200
 asp pro his gln thr lys glu gln lys ile leu gln glu thr leu
 GAC CCC CAT CAG ACC AAA GAG CAG AAG ATT CTG CAG GAA ACT CTC
 210
 asn glu leu asp lys arg arg lys glu val leu asp ala ser lys
 AAT GAA CTG GAC AAA AGG AGA AAG GAG GTG CTG GAT GCC TCC AAA
 220 230
 ala leu leu gly arg leu thr thr leu ile glu leu leu leu pro
 GCA CTG CTA GGC CGA TTA ACT ACC CTA ATC GAG CTA CTG CTG CCA
 240
 lys leu glu glu trp lys ala gln gln gln lys ala cys ile arg
 AAG TTG GAG GAG TGG AAG GCC CAG CAG CAA AAA GCC TGC ATC AGA
 250 260
 ala pro ile asp his gly leu glu gln leu glu thr trp phe thr
 GCT CCC ATT GAC CAC GGG TTG GAA CAG CTG GAG ACA TGG TTC ACA
 270
 ala gly ala lys leu leu phe his leu arg gln leu leu lys glu
 GCT GGA GCA AAG CTG TTG TTT CAC CTG AGG CAG CTG CTG AAG GAG
 280 290
 leu lys gly leu ser cys leu val ser tyr gln asp asp pro leu
 CTG AAG GGA CTG AGT TGC CTG GTT AGC TAT CAG GAT GAC CCT CTG
 300
 thr lys gly val asp leu arg asn ala gln val thr glu leu leu
 ACC AAA GGG GTG GAC CTA CGC AAC GCC CAG GTC ACA GAG TTG CTA
 310 320
 gln arg leu leu his arg ala phe val val glu thr gln pro cys
 CAG CGT CTG CTC CAC AGA GCC TTT GTG GTA GAA ACC CAG CCC TGC
 330
 met pro gln thr pro his arg pro leu ile leu lys thr gly ser
 ATG CCC CAA ACT CCC CAT CGA CCC CTC ATC CTC AAG ACT GGC AGC
 340 350
 lys phe thr val arg thr arg leu leu val arg leu gln glu gly
 AAG TTC ACC GTC CGA ACA AGG CTG CTG GTG AGA CTC CAG GAA GGC
 360
 asn glu ser leu thr val glu val ser ile asp arg asn pro pro
 AAT GAG TCA CTG ACT GTG GAA GTC TCC ATT GAC AGG AAT CCT CCT
 370 380
 gln leu gln gly phe arg lys phe asn ile leu thr ser asn gln
 CAA TTA CAA GGC TTC CGG AAG TTC AAC ATT CTG ACT TCA AAC CAG
 390
 lys thr leu thr pro glu lys gly gln ser gln gly leu ile trp

Figure 1B

AAA ACT TTG ACC CCC GAG AAG GGG CAG AGT CAG GGT TTG ATT TGG
 400 410
 asp phe gly tyr leu thr leu val glu gln arg ser gly gly ser
 GAC TTT GGT TAC CTG ACT CTG GTG GAG CAA CGT TCA GGT GGT TCA
 420
 gly lys gly ser asn lys gly pro leu gly val thr glu glu leu
 GGA AAG GGC AGC AAT AAG GGG CCA CTA GGT GTG ACA GAG GAA CTG
 430 440
 his ile ile ser phe thr val lys tyr thr tyr gln gly leu lys
 CAC ATC ATC AGC TTC ACG GTC AAA TAT ACC TAC CAG GGT CTG AAG
 450
 gln glu leu lys thr asp thr leu pro val val ile ile ser asn
 CAG GAG CTG AAA ACG GAC ACC CTC CCT GTG GTG ATT ATT TCC AAC
 460 470
 met asn gln leu ser ile ala trp ala ser val leu trp phe asn
 ATG AAC CAG CTC TCA ATT GCC TGG GCT TCA GTT CTC TGG TTC AAT
 480
 leu leu ser pro asn leu gln asn gln gln phe phe ser asn pro
 TTG CTC AGC CCA AAC CTT CAG AAC CAG CAG TTC TTC TCC AAC CCC
 490 500
 pro lys ala pro trp ser leu leu gly pro ala leu ser trp gln
 CCC AAG GCC CCC TGG AGC TTG CTG GGC CCT GCT CTC AGT TGG CAG
 510
 phe ser ser tyr val gly arg gly leu asn ser asp gln leu ser
 TTC TCC TCC TAT GTT GGC CGA GGC CTC AAC TCA GAC CAG CTG AGC
 520 530
 met leu arg asn lys leu phe gly gln asn cys arg thr glu asp
 ATG CTG AGA AAC AAG CTG TTC GGG CAG AAC TGT AGG ACT GAG GAT
 540
 pro leu leu ser trp ala asp phe thr lys arg glu ser pro pro
 CCA TTA TTG TCC TGG GCT GAC TTC ACT AAG CGA GAG AGC CCT CCT
 550 560
 gly lys leu pro phe trp thr trp leu asp lys ile leu glu leu
 GGC AAG TTA CCA TTC TGG ACA TGG CTG GAC AAA ATT CTG GAG TTG
 570
 val his asp his leu lys asp leu trp asn asp gly arg ile met
 GTA CAT GAC CAC CTG AAG GAT CTC TGG AAT GAT GGA CGC ATC ATG
 580 590
 gly phe val ser arg ser gln glu arg arg leu leu lys lys thr
 GGC TTT GTG AGT CGG AGC CAG GAG CGC CGG CTG CTG AAG AAG ACC
 600
 met ser gly thr phe leu leu arg phe ser glu ser ser glu gly
 ATG TCT GGC ACC TTT CTA CTG CGC TTC ACT GAA TCG TCA GAA GGG

Figure 1C

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        610                                620
gly ile thr cys ser trp val glu his gln asp asp asp lys val
GGC ATT ACC TGC TCC TGG GTG GAG CAC CAG GAT GAT GAC AAG GTG

        630
leu ile tyr ser val gln pro tyr thr lys glu val leu gln ser
CTC ATC TAC TCT GTG CAA CCG TAC ACG AAG GAG GTG CTG CAG TCA

        640                                650
leu pro leu thr glu ile ile arg his tyr gln leu leu thr glu
CTC CCG CTG ACT GAA ATC ATC CGC CAT TAC CAG TTG CTC ACT GAG

        660
glu asn ile pro glu asn pro leu arg phe leu tyr pro arg ile
GAG AAT ATA CCT GAA AAC CCA CTG CGC TTC CTC TAT CCC CGA ATC

        670                                680
pro arg asp glu ala phe gly cys tyr tyr gln glu lys val asn
CCC CGG GAT GAA GCT TTT GGG TGC TAC TAC CAG GAG AAA GTT AAT

        690
leu gln glu arg arg lys tyr leu lys his arg leu ile val val
CTC CAG GAA CGG AGG AAA TAC CTG AAA CAC AGG CTC ATT GTG GTC

        700                                710
ser asn arg gln val asp glu leu gln gln pro leu glu leu lys
TCT AAT AGA CAG GTG GAT GAA CTG CAA CAA CCG CTG GAG CTT AAG

        720
pro glu pro glu leu glu ser leu glu leu glu leu gly leu val
CCA GAG CCA GAG CTG GAG TCA TTA GAG CTG GAA CTA GGG CTG GTG

        730                                740
pro glu pro glu leu ser leu asp leu glu pro leu leu lys ala
CCA GAG CCA GAG CTC AGC CTG GAC TTA GAG CCA CTG CTG AAG GCA

        750
gly leu asp leu gly pro glu leu glu ser val leu glu ser thr
GGG CTG GAT CTG GGG CCA GAG CTA GAG TCT GTG CTG GAG TCC ACT

        760                                770
leu glu pro val ile glu pro thr leu cys met val ser gln thr
CTG GAG CCT GTG ATA GAG CCC ACA CTA TGC ATG GTA TCA CAA ACA

        780
val pro glu pro asp gln gly pro val ser gln pro val pro glu
GTG CCA GAG CCA GAC CAA GGA CCT GTA TCA CAG CCA GTG CCA GAG

        790                                800
pro asp leu pro cys asp leu arg his leu asn thr glu pro met
CCA GAT TTG CCC TGT GAT CTG AGA CAT TTG AAC ACT GAG CCA ATG

        810
glu ile phe arg asn cys val lys ile glu glu ile met pro asn
GAA ATC TTC AGA AAC TGT GTA AAG ATT GAA GAA ATC ATG CCG AAT

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Figure 1D

020 030
gly asp pro leu leu ala gly gln asn thr val asp glu val tyr
GGT GAC CCA CTG TTG GCT GGC CAG AAC ACC GTG GAT GAG GTT TAC

040
val ser arg pro ser his phe tyr thr asp gly pro leu met pro
GTC TCC CGC CCC AGC CAC TTC TAC ACT GAT GGA CCC TTG ATG CCT

050 051
ser asp phe AM
TCT GAC TTC TAG GAACCAACATTTCTCTGTTCTTTTCATATCTCTTTGCCCTTCCTA
CTCCTCATAGCATGATATTGTTCTCCAAAGGATGGGAATCAGGCATGTGTCCCTTCCAAAGC
TGTGTTAACTGTTCAAACCTCAGGCCTGTGTGACTCCATTGGGGTGAGAGGTGAAGCAT
ACATGGGTACAGAGGGGACAAATGAATCAGAACAGATGCTGAGCCATAGGTCTAAATA
GGATCCTGGAGGCTGCCCTGCTGTGCTGGGAGGTATAGGGGTCTGGGGCAGGCCAGGGC
AGTTGACAGGTACTTGGAGGGCTCAGGGCAGTGGCTTCTTTCCAGTATGGAAGGATTTCA
ACATTTTAATAGTTGGTTAGGCTAAACTGGTGCATACTGGCATTGGCCTTGGTGGGGAGC
ACAGACACAGGATAGGACTCCATTTCTTTCTTCCAATCCCTTCATGTCTAGGATAACTTGC
TTTCTTCTTTCCCTTTACTCCTGGCTCAAGCCCTGAATTTCTTCTTTTCCCTGCAGGGTTG
AGAGCTTTCTGCCTTAGCCTACCATGTGAAACTCTACCCTGAAAGAAAGGGATGGATAGGA
AGTAGACCTCTTTTTCTTACCAGTCTCCTCCCCTACTCTGCCCCCTAAGCTGGCTGTACC
TGTTCTCCCCCATAAATGATCCTGCCAATCTAAAAAAAAA

Figure 1E

ATTAAACCTCTCGCCGAGCCCCTCCGCAGACTCTGCGCCGAAAGTTTCATTTGCTGTATGCCATCCTCGA

GAGCTGTCTAGGTTAACGTTTCGCACTCTGTGTATATAACCTCGACAGTCTTGGCACCTAACGTGCTGTGCG

Met Ser Gln Trp
TAGCTGCTCCTTTGGTTGAATCCCCAGGCCCTTGTGGGGCACAAGGTGGCAGG ATG TCT CAG TGG

Tyr Glu Leu Gln Gln Leu Asp Ser Lys Phe Leu Glu Gln Val His Gln Leu Tyr
TAC GAA CTT CAG CAG CTT GAC TCA AAA TTC CTG GAG CAG GTT CAC CAG CTT TAT

Asp Asp Ser Phe Pro Met Glu Ile Arg Gln Tyr Leu Ala Gln Trp Leu Glu Lys
GAT GAC AGT TTT CCC ATG GAA ATC AGA CAG TAC CTG GCA CAG TGG TTA GAA AAG

Gln Asp Trp Glu His Ala Ala Asn Asp Val Ser Phe Ala Thr Ile Arg Phe His
CAA GAC TGG GAG CAC GCT GCC AAT GAT GTT TCA TTT GCC ACC ATC CGT TTT CAT

Asp Leu Leu Ser Gln Leu Asp Asp Gln Tyr Ser Arg Phe Ser Leu Glu Asn Asn
GAC CTC CTG TCA CAG CTG GAT GAT CAA TAT AGT CGC TTT TCT TTG GAG AAT AAC

Phe Leu Leu Gln His Asn Ile Arg Lys Ser Lys Arg Asn Leu Gln Asp Asn Phe
TTC TTG CTA CAG CAT AAC ATA AGG AAA AGC AAG CGT AAT CTT CAG GAT AAT TTT

Gln Glu Asp Pro Ile Gln Met Ser Met Ile Ile Tyr Ser Cys Leu Lys Glu Glu
CAG GAA GAC CCA ATC CAG ATG TCT ATG ATC ATT TAC AGC TGT CTG AAG GAA GAA

Arg Lys Ile Leu Glu Asn Ala Gln Arg Phe Asn Gln Ala Gln Ser Gly Asn Ile
AGG AAA ATT CTG GAA AAC GCC CAG AGA TTT AAT CAG GCT CAG TCG GGG AAT ATT

Gln Ser Thr Val Met Leu Asp Lys Gln Lys Glu Leu Asp Ser Lys Val Arg Asn
CAG AGC ACA GTG ATG TTA GAC AAA CAG AAA GAG CTT GAC AGT AAA GTC AGA AAT

Val Lys Asp Lys Val Met Cys Ile Glu His Glu Ile Lys Ser Leu Glu Asp Leu
GTG AAG GAC AAG GTT ATG TGT ATA GAG CAT GAA ATC AAG AGC CTG GAA GAT TTA

Gln Asp Glu Tyr Asp Phe Lys Cys Lys Thr Leu Gln Asn Arg Glu His Glu Thr
CAA GAT GAA TAT GAC TTC AAA TGC AAA ACC TTG CAG AAC AGA GAA CAC GAG ACC

Asn Gly Val Ala Lys Ser Asp Gln Lys Gln Glu Gln Leu Leu Leu Lys Lys Met
AAT GGT GTG GCA AAG AGT GAT CAG AAA CAA GAA CAG CTG TTA CTC AAG AAG ATG

Tyr Leu Met Leu Asp Asn Lys Arg Lys Glu Val Val His Lys Ile Ile Glu Leu
TAT TTA ATG CTT GAC AAT AAG AGA AAG GAA GTA GTT CAC AAA ATA ATA GAG TTG

Leu Asn Val Thr Glu Leu Thr Gln Asn Ala Leu Ile Asn Asp Glu Leu Val Glu
CTG AAT GTC ACT GAA CTT ACC CAG AAT GCC CTG ATT AAT GAT GAA CTA GTG GAG

Trp Lys Arg Arg Gln Gln Ser Ala Cys Ile Gly Gly Pro Pro Asn Ala Cys Leu
TGG AAG CGG AGA CAG CAG AGC GCC TGT ATT GGG GGG CCG CCC AAT GCT TGC TTG

Asp Gln Leu Gln Asn Trp Phe Thr Ile Val Ala Glu Ser Leu Gln Gln Val Arg
GAT CAG CTG CAG AAC TGG TTC ACT ATA GTT GCG GAG AGT CTG CAG CAA GTT CGG

Gln Gln Leu Lys Lys Leu Glu Glu Leu Glu Gln Lys Tyr Thr Tyr Glu His Asp
CAG CAG CTT AAA AAG TTG GAG GAA TTG GAA CAG AAA TAC ACC TAC GAA CAT GAC

Pro Ile Thr Lys Asn Lys Gln Val Leu Trp Asp Arg Thr Phe Ser Leu Phe Gln
CCT ATC ACA AAA AAC AAA CAA GTG TTA TGG GAC CGC ACC TTC AGT CTT TTC CAG

Figure 2A

Gln Leu Ile Gln Ser Ser Phe Val Val Glu Arg Gln Pro Cys Met Pro Thr His
 CAG CTC ATT CAG AGC TCG TTT GTG GTG GAA AGA CAG CCC TGC ATG CCA ACG CAC

Pro Gln Arg Pro Leu Val Leu Lys Thr Gly Val Gln Phe Thr Val Lys Leu Arg
 CCT CAG AGG CCG CTG GTC TTG AAG ACA GGG GTC CAG TTC ACT GTG AAG TTG AGA

Leu Leu Val Lys Leu Gln Glu Leu Asn Tyr Asn Leu Lys Val Lys Val Leu Phe
 CTG TTG GTG AAA TTG CAA GAG CTG AAT TAT AAT TTG AAA GTC AAA GTC TTA TTT

Asp Lys Asp Val Asn Glu Arg Asn Thr Val Lys Gly Phe Arg Lys Phe Asn Ile
 GAT AAA GAT GTG AAT GAG AGA AAT ACA GTA AAA GGA TTT AGG AAG TTC AAC ATT

Leu Gly Thr His Thr Lys Val Met Asn Met Glu Glu Ser Thr Asn Gly Ser Leu
 TTG GGC ACG CAC ACA AAA GTG ATG AAC ATG GAG GAG TCC ACC AAT GGC AGT CTG

Ala Ala Glu Phe Arg His Leu Gln Leu Lys Glu Gln Lys Asn Ala Gly Thr Arg
 GCG GCT GAA TTT CGG CAC CTG CAA TTG AAA GAA CAG AAA AAT GCT GGC ACC AGA

Thr Asn Glu Gly Pro Leu Ile Val Thr Glu Glu Leu His Ser Leu Ser Phe Glu
 ACG AAT GAG GGT CCT CTC ATC GTT ACT GAA GAG CTT CAC TCC CTT AGT TTT GAA

Thr Gln Leu Cys Gln Pro Gly Leu Val Ile Asp Leu Glu Thr Thr Ser Leu Pro
 ACC CAA TTG TGC CAG CCT GGT TTG GTA ATT GAC CTC GAG ACG ACC TCT CTG CCC

Val Val Val Ile Ser Asn Val Ser Gln Leu Pro Ser Gly Trp Ala Ser Ile Leu
 GTT GTG GTG ATC TCC AAC GTC AGC CAG CTC CCG AGC GGT TGG GCC TCC ATC CTT

Trp Tyr Asn Met Leu Val Ala Glu Pro Arg Asn Leu Ser Phe Phe Leu Thr Pro
 TGG TAC AAC ATG CTG GTG GCG GAA CCC AGG AAT CTG TCC TTC TTC CTG ACT CCA

Pro Cys Ala Arg Trp Ala Gln Leu Ser Glu Val Leu Ser Trp Gln Phe Ser Ser
 CCA TGT GCA CGA TGG GCT CAG CTT TCA GAA GTG CTG AGT TGG CAG TTT TCT TCT

Val Thr Lys Arg Gly Leu Asn Val Asp Gln Leu Asn Met Leu Gly Glu Lys Leu
 GTC ACC AAA AGA GGT CTC AAT GTG GAC CAG CTG AAC ATG TTG GGA GAG AAG CTT

Leu Gly Pro Asn Ala Ser Pro Asp Gly Leu Ile Pro Trp Thr Arg Phe Cys Lys
 CTT GGT CCT AAC GCC AGC CCC GAT GGT CTC ATT CCG TGG ACG AGG TTT TGT AAG

Glu Asn Ile Asn Asp Lys Asn Phe Pro Phe Trp Leu Trp Ile Glu Ser Ile Leu
 GAA AAT ATA AAT GAT AAA AAT TTT CCC TTC TGG CTT TGG ATT GAA AGC ATC CTA

Glu Leu Ile Lys Lys His Leu Leu Pro Leu Trp Asn Asp Gly Cys Ile Met Gly
 GAA CTC ATT AAA AAA CAC CTG CTC CCT CTC TGG AAT GAT GGG TGC ATC ATG GGC

Phe Ile Ser Lys Glu Arg Glu Arg Ala Leu Leu Lys Asp Gln Gln Pro Gly Thr
 TTC ATC AGC AAG GAG CGA GAG CGT GCC CTG TTG AAG GAC CAG CAG CCG GGG ACC

Phe Leu Leu Arg Phe Ser Glu Ser Ser Arg Glu Gly Ala Ile Thr Phe Thr Trp
 TTC CTG CTG CGG TTC AGT GAG AGC TCC CGG GAA GGG GCC ATC ACA TTC ACA TGG

Val Glu Arg Ser Gln Asn Gly Gly Glu Pro Asp Phe His Ala Val Glu Pro Tyr
 GTG GAG CGG TCC CAG AAC GGA GGC GAA CCT GAC TTC CAT GCG GTT GAA CCC TAC

Thr Lys Lys Glu Leu Ser Ala Val Thr Phe Pro Asp Ile Ile Arg Asn Tyr Lys
 ACG AAG AAA GAA CTT TCT GCT GTT ACT TTC CCT GAC ATC ATT CGC AAT TAC AAA

Val Met Ala Ala Glu Asn Ile Pro Glu Asn Pro Leu Lys Tyr Leu Tyr Pro Asn
 GTC ATG GCT GCT GAG AAT ATT CCT GAG AAT CCC CTG AAG TAT CTG TAT CCA AAT

Figure 2B

Ile Asp Lys Asp His Ala Phe Gly Lys Tyr Tyr Ser Arg Pro Lys Glu Ala Pro
 ATT GAC AAA GAC CAT GCC TTT GGA AAG TAT TAC TCC AGG CCA AAG GAA GCA CCA

 Glu Pro Met Glu Leu Asp Gly Pro Lys Gly Thr Gly Tyr Ile Lys Thr Glu Leu
 GAG CCA ATG GAA CTT GAT GGC CCT AAA GGA ACT GGA TAT ATC AAG ACT GAG TTG

 Ile Ser Val Ser Glu Val His Pro Ser Arg Leu Gln Thr Thr Asp Asn Leu Leu
 ATT TCT GTG TCT GAA GTT CAC CCT TCT AGA CTT CAG ACC ACA GAC AAC CTG CTC

 Pro Met Ser Pro Glu Glu Phe Asp Glu Val Ser Arg Ile Val Gly Ser Val Glu
 CCC ATG TCT CCT GAG GAG TTT GAC GAG GTG TCT CGG ATA GTG GGC TCT GTA GAA

 Phe Asp Ser Met Met Asn Thr Val
 TTC GAC AGT ATG ATG AAC ACA GTA TAGAGCATGAATTTTTTCATCTTCTCTGGCGACAGTTT

 TCCTTCTCATCTGTGATTCCCTCCTGCTACTCTGTTCTCCTTCACATCCTGTGTTTCTAGGGAAATGAAAGAA

 AGGCCAGCAAAATCGCTGCAACCTGTTGATAGCAAGTGAATTTTTCTCTAACTCAGAAACATCAGTTACTC

 TGAAGGGCATCATGCATCTTACTGAAGGTAAAATTGAAAGGCATTCTCTGAAGAGTGGGTTTCACAAGTGA

 AAAACATCCAGATACACCCAAAGTATCAGGACGAGAATGAGGGTCCTTTGGGAAAGGAGAAGTTAAGCAAC

 ATCTAGCAAATGTTATGCATAAAGTCAGTGCCCAACTGTTATAGGTTGTTGGATAAATCAGTGGTTATTTA

 GGGAACTGCTTGACGTAGGAACGGTAAATTTCTGTGGGAGAATTCTTACATGTTTTCTTTGCTTTAAGTGT

 AACTGGCAGTTTCCATTGGTTTACCTGTGAAATAGTTCAAAGCCAAGTTTATATACAATTATATCAGTCC

 TCTTTCAAAGGTAGCCATCATGGATCTGGTAGGGGAAAAATGTGTATTTTATTACATCTTTCACATTGGCT

 ATTTAAAGACAAAGACAAATTCTGTTTCTTGAGAAGAGAATATTAGCTTTACTGTTTGTATGGCTTAATG

 AACTAGCTAATATCAATAGAAGGATGTACATTTCCAAATTCACAAGTTGTGTTTGATATCCAAAGCTGAA

 TACATTCTGCTTTCATCTTGGTCACATACAATTATTTTACAGTTCTCCCAAGGGAGTTAGGCTATTCACA

 ACCACTCATTCAAAAGTTGAAATTAACCATAGATGTAGATAAACTCAGAAATTTAATTCATGTTTCTTAAA

 TGGGCTACTTTGTCCTTTTTGTTATTAGGGTGGTATTTAGTCTATTAGCCACAAAATTGGGAAAGGAGTAG

 AAAAGCAGTAACTGACAACTTGAATAATACACCAGAGATAATATGAGAATCAGATCATTTCAAACTCAT

 TTCCTATGTAAGTGCATTGAGAACTGCATATGTTTCGCTGATATATGTGTTTTTCACATTTGCGAATGGTT

Figure 2C

CCATTCTCTCTCCTGTACTTTTTCCAGACACTTTTTTGAGTGGATGATGTTTCGTGAAGTATACTGTATTT
TTACCTTTTTTCCTTCCTTATCACTGACACAAAAAGTAGATTAAGAGATGGGTTTGACAAGGTTCTTCCCTT
TTACATACTGCTGTCTATGTGGCTGTATCTTGTTTTTCCACTACTGCTACCACAACCTATATTATCATGCAA
ATGCTGTATTCTTCTTTGGTGGAGATAAAGATTTCTTGAGTTTGTTTTAAATTAAGCTAAAGTATCTG
TATTGCATTAAATATAATATCGACACAGTGCTTTCCGTGGCACTGCATACAATCTGAGGCCTCCTCTCTCA
GTTTTTATATAGATGGCGAGAACCTAAGTTTCAGTTGATTTTACAATTGAAATGACTAAAAACAAAGAAG
ACAACATTAAAAACAATATTGTTTCTA

Figure 2D

ATTAAACCTCTCGCCGAGCCCTCCGCAGACTCTGCGCCGAAAGTTTCATTTGCTGTATGCCATCCTCGA

GAGCTGTCTAGGTTAACGTTTCGCACTCTGTGTATATAACCTCGACAGTCTTGGCACCTAACGTGCTGTGCG

Met Ser Gln Trp
TAGCTGCTCCTTTGGTTGAATCCCCAGGCCCTTGTGGGGCACAAGGTGGCAGG ATG TCT CAG TGG

Tyr Glu Leu Gln Gln Leu Asp Ser Lys Phe Leu Glu Gln Val His Gln Leu Tyr
TAC GAA CTT CAG CAG CTT GAC TCA AAA TTC CTG GAG CAG GTT CAC CAG CTT TAT

Asp Asp Ser Phe Pro Met Glu Ile Arg Gln Tyr Leu Ala Gln Trp Leu Glu Lys
GAT GAC AGT TTT CCC ATG GAA ATC AGA CAG TAC CTG GCA CAG TGG TTA GAA AAG

Gln Asp Trp Glu His Ala Ala Asn Asp Val Ser Phe Ala Thr Ile Arg Phe His
CAA GAC TGG GAG CAC GCT GCC AAT GAT GTT TCA TTT GCC ACC ATC CGT TTT CAT

Asp Leu Leu Ser Gln Leu Asp Asp Gln Tyr Ser Arg Phe Ser Leu Glu Asn Asn
GAC CTC CTG TCA CAG CTG GAT GAT CAA TAT AGT CGC TTT TCT TTG GAG AAT AAC

Phe Leu Leu Gln His Asn Ile Arg Lys Ser Lys Arg Asn Leu Gln Asp Asn Phe
TTC TTG CTA CAG CAT AAC ATA AGG AAA AGC AAG CGT AAT CTT CAG GAT AAT TTT

Gln Glu Asp Pro Ile Gln Met Ser Met Ile Ile Tyr Ser Cys Leu Lys Glu Glu
CAG GAA GAC CCA ATC CAG ATG TCT ATG ATC ATT TAC AGC TGT CTG AAG GAA GAA

Arg Lys Ile Leu Glu Asn Ala Gln Arg Phe Asn Gln Ala Gln Ser Gly Asn Ile
AGG AAA ATT CTG GAA AAC GCC GAA AGA TTT AAT CAG GCT CAG TCG GGG AAT ATT

Gln Ser Thr Val Met Leu Asp Lys Gln Lys Glu Leu Asp Ser Lys Val Arg Asn
CAG AGC ACA GTG ATG TTA GAC AAA CAG AAA GAG CTT GAC AGT AAA GTC AGA AAT

Val Lys Asp Lys Val Met Cys Ile Glu His Glu Ile Lys Ser Leu Glu Asp Leu
GTG AAG GAC AAG GTT ATG TGT ATA GAG CAT GAA ATC AAG AGC CTG GAA GAT TTA

Gln Asp Glu Tyr Asp Phe Lys Cys Lys Thr Leu Gln Asn Arg Glu His Glu Thr
CAA GAT GAA TAT GAC TTC AAA TGC AAA ACC TTG CAG AAC AGA GAA CAC GAG ACC

Asn Gly Val Ala Lys Ser Asp Gln Lys Gln Glu Gln Leu Leu Leu Lys Lys Met
AAT GGT GTG GCA AAG AGT GAT CAG AAA CAA GAA CAG CTG TTA CTC AAG AAG ATG

Tyr Leu Met Leu Asp Asn Lys Arg Lys Glu Val Val His Lys Ile Ile Glu Leu
TAT TTA ATG CTT GAC AAT AAG AGA AAG GAA GTA GTT CAC AAA ATA ATA GAG TTG

Leu Asn Val Thr Glu Leu Thr Gln Asn Ala Leu Ile Asn Asp Glu Leu Val Glu
CTG AAT GTC ACT GAA CTT ACC CAG AAT GCC CTG ATT AAT GAT GAA CTA GTG GAG

Trp Lys Arg Arg Gln Gln Ser Ala Cys Ile Gly Gly Pro Pro Asn Ala Cys Leu
TGG AAG CGG AGA CAG CAG AGC GCC TGT ATT GGG GGG CCG CCC AAT GCT TGC TTG

Asp Gln Leu Gln Asn Trp Phe Thr Ile Val Ala Glu Ser Leu Gln Gln Val Arg
GAT CAG CTG CAG AAC TGG TTC ACT ATA GTT GCG GAG AGT CTG CAG CAA GTT CGG

Gln Gln Leu Lys Lys Leu Glu Glu Leu Glu Gln Lys Tyr Thr Tyr Glu His Asp
CAG CAG CTT AAA AAG TTG GAG GAA TTG GAA CAG AAA TAC ACC TAC GAA CAT GAC

Pro Ile Thr Lys Asn Lys Gln Val Leu Trp Asp Arg Thr Phe Ser Leu Phe Gln
CCT ATC ACA AAA AAC AAA CAA GTG TTA TGG GAC CGC ACC TTC AGT CTT TTC CAG

Figure 3A

Gln Leu Ile Gln Ser Ser Phe Val Val Glu Arg Gln Pro Cys Met Pro Thr His
 CAG CTC ATT CAG AGC TCG TTT GTG GTG GAA AGA CAG CCC TGC ATG CCA ACG CAC

 Pro Gln Arg Pro Leu Val Leu Lys Thr Gly Val Gln Phe Thr Val Lys Leu Arg
 CCT CAG AGG CCG CTG GTC TTG AAG ACA GGG GTC CAG TTC ACT GTG AAG TTG AGA

 Leu Leu Val Lys Leu Gln Glu Leu Asn Tyr Asn Leu Lys Val Lys Val Leu Phe
 CTG TTG GTG AAA TTG CAA GAG CTG AAT TAT AAT TTG AAA GTC AAA GTC TTA TTT

 Asp Lys Asp Val Asn Glu Arg Asn Thr Val Lys Gly Phe Arg Lys Phe Asn Ile
 GAT AAA GAT GTG AAT GAG AGA AAT ACA GTA AAA GGA TTT AGG AAG TTC AAC ATT

 Leu Gly Thr His Thr Lys Val Met Asn Met Glu Glu Ser Thr Asn Gly Ser Leu
 TTG GGC ACG CAC ACA AAA GTG ATG AAC ATG GAG GAG TCC ACC AAT GGC AGT CTG

 Ala Ala Glu Phe Arg His Leu Gln Leu Lys Glu Gln Lys Asn Ala Gly Thr Arg
 CCG GCT GAA TTT CGG CAC CTG CAA TTG AAA GAA CAG AAA AAT GCT GGC ACC AGA

 Thr Asn Glu Gly Pro Leu Ile Val Thr Glu Glu Leu His Ser Leu Ser Phe Glu
 ACG AAT GAG GGT CCT CTC ATC GTT ACT GAA GAG CTT CAC TCC CTT AGT TTT GAA

 Thr Gln Leu Cys Gln Pro Gly Leu Val Ile Asp Leu Glu Thr Thr Ser Leu Pro
 ACC CAA TTG TGC CAG CCT GGT TTG GTA ATT GAC CTC GAG ACG ACC TCT CTG CCC

 Val Val Val Ile Ser Asn Val Ser Gln Leu Pro Ser Gly Trp Ala Ser Ile Leu
 GTT GTG GTG ATC TCC AAC GTC AGC CAG CTC CCG AGC GGT TGG GCC TCC ATC CTT

 Trp Tyr Asn Met Leu Val Ala Glu Pro Arg Asn Leu Ser Phe Phe Leu Thr Pro
 TGG TAC AAC ATG CTG GTG GCG GAA CCC AGG AAT CTG TCC TTC TTC CTG ACT CCA

 Pro Cys Ala Arg Trp Ala Gln Leu Ser Glu Val Leu Ser Trp Gln Phe Ser Ser
 CCA TGT GCA CGA TGG GCT CAG CTT TCA GAA GTG CTG AGT TGG CAG TTT TCT TCT

 Val Thr Lys Arg Gly Leu Asn Val Asp Gln Leu Asn Met Leu Gly Glu Lys Leu
 GTC ACC AAA AGA GGT CTC AAT GTG GAC CAG CTG AAC ATG TTG GGA GAG AAG CTT

 Leu Gly Pro Asn Ala Ser Pro Asp Gly Leu Ile Pro Trp Thr Arg Phe Cys Lys
 CTT GGT CCT AAC GCC AGC CCC GAT GGT CTC ATT CCG TGG ACG AGG TTT TGT AAG

 Glu Asn Ile Asn Asp Lys Asn Phe Pro Phe Trp Leu Trp Ile Glu Ser Ile Leu
 GAA AAT ATA AAT GAT AAA AAT TTT CCC TTC TGG CTT TGG ATT GAA AGC ATC CTA

 Glu Leu Ile Lys Lys His Leu Leu Pro Leu Trp Asn Asp Gly Cys Ile Met Gly
 GAA CTC ATT AAA AAA CAC CTG CTC CCT CTC TGG AAT GAT GGG TGC ATC ATG GGC

 Phe Ile Ser Lys Glu Arg Glu Arg Ala Leu Leu Lys Asp Gln Gln Pro Gly Thr
 TTC ATC AGC AAG GAG CGA GAG CGT GCC CTG TTG AAG GAC CAG CAG CCG GGG ACC

 Phe Leu Leu Arg Phe Ser Glu Ser Ser Arg Glu Gly Ala Ile Thr Phe Thr Trp
 TTC CTG CTG CGG TTC AGT GAG AGC TCC CGG GAA GGG GCC ATC ACA TTC ACA TGG

 Val Glu Arg Ser Gln Asn Gly Gly Glu Pro Asp Phe His Ala Val Glu Pro Tyr
 GTG GAG CGG TCC CAG AAC GGA GGC GAA CCT GAC TTC CAT GCG GTT GAA CCC TAC

 Thr Lys Lys Glu Leu Ser Ala Val Thr Phe Pro Asp Ile Ile Arg Asn Tyr Lys
 ACG AAG AAA GAA CTT TCT GCT GTT ACT TTC CCT GAC ATC ATT CGC AAT TAC AAA

 Val Met Ala Ala Glu Asn Ile Pro Glu Asn Pro Leu Lys Tyr Leu Tyr Pro Asn
 GTC ATG GCT GCT GAG AAT ATT CCT GAG AAT CCC CTG AAG TAT CTG TAT CCA AAT

Figure 3B

Ile Asp Lys Asp His Ala Phe Gly Lys Tyr Tyr Ser Arg Pro Lys Glu Ala Pro
ATT GAC AAA GAC CAT GCC TTT GGA AAG TAT TAC TCC AGG CCA AAG GAA GCA CCA

Glu Pro Met Glu Leu Asp Gly Pro Lys Gly Thr Gly Tyr Ile Lys Thr Glu Leu
GAG CCA ATG GAA CTT GAT GGC CCT AAA GGA ACT GGA TAT ATC AAG ACT GAG TTG

Ile Ser Val Ser Glu Val

ATT TCT GTG TCT GAA GTG TAAGTGAACACAGAAGAGTGACATGTTTACAAACCTCAAGCCAGCCT

TGCTCCTGGCTGGGGCCTGTTGAAGATGCTTGTATTTTACTTTTCCATTGTAATTGCTATCGCCATCACAG

CTGAACTTGTTGAGATCCCCGTGTTACTGCCTATCAGCATTTTACTACTTTAAAAAAAAAAAAAAAAAGCCA

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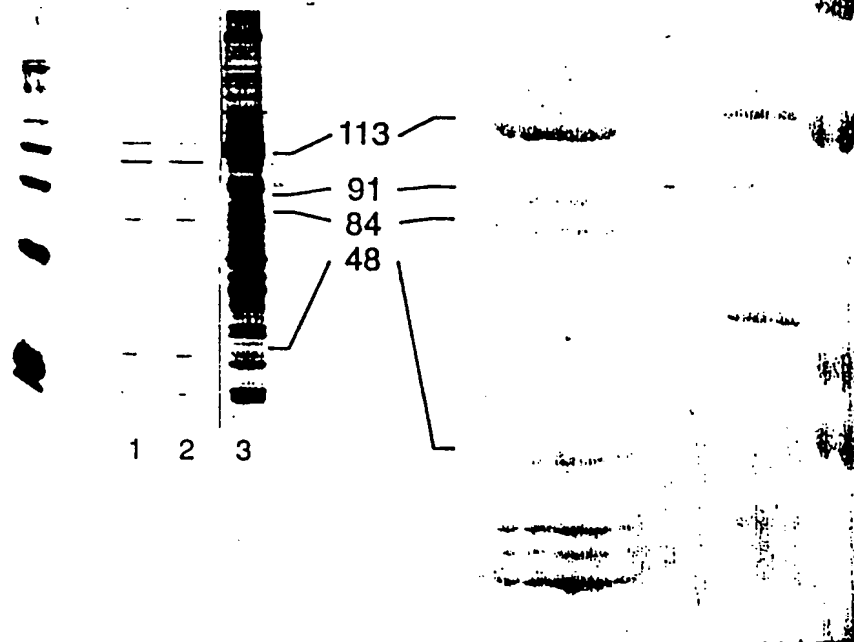


Figure 4

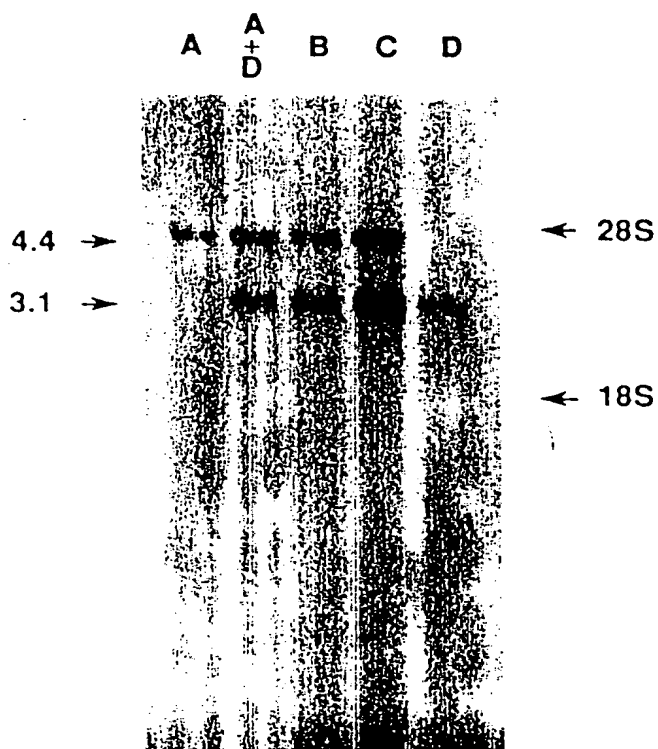
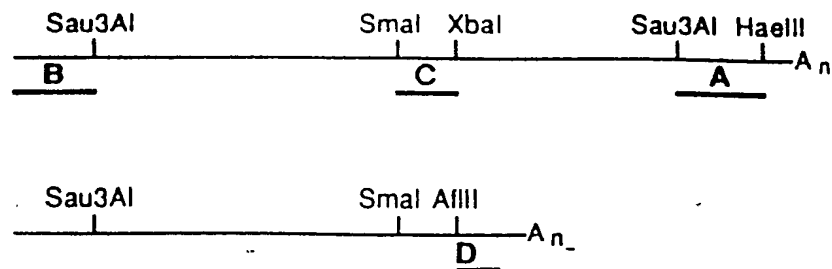


Figure 5

1 MSQWYELOQLDSKFLEQVHQLYDDSPMEIRQYLAQWLEKQDWEHAANDV
51 SFATIRFHDLLSQLDDQYSRFSLENNFLLQIINIRKSKRNLDNFQEDPIQ
101 MSMIIYSCLKEERKILENAQRFHQASGNIQSTVMIDKQKELDSKVRNVK
151 DKVMCIEHEIKSLEDLQDEYDFKCKTLQNREHETNGVAKSDQKQEQLLLK
201 KHYLMLDNKRKEVVHKIIELLNVTELTQNALINDELVEWKRRQQSACIGG
251 PPNACLDQLQQVRQQLKKLEELEQKYTYENDPITKNKQVLWDRFSLFQQ
301 LIQSSFVVERQPCMTIHPQRPLVLKTGVQFTVKLRLLVVKLQELNYNLKVK
351 VLFDKDVNERNTVKGFRKFNILGTHKVMNMEESTNGSLAAEFRHLQLKE
401 QKNAGTRTHEGPLIVTEELHSLSFETQLCQPGGLVIDLETTSLPVVVISNV
451 SQLPSGWASILWYNMLVAEPRNLSFFLTPPCARWAQLSEVLSWQFSSVTK
501 RGLNVDQLNMLGEKLLGPNASPDGLIPWTRFCKENINDKNFPFWLWIESI
551 LELIKKHLPLWNDGCIMGFISKERERALLKDQQPGTFLLRFSESSREGA
601 ITFTWVERSQNGGEPDFHAVEPYTKKELSAVTFPDIIRNYKVMAAENIPE
651 NPLKYLYPNIDKDHAFGKYYSRPKEAPEPMELDGPKGTYIKTELISVSE
701 VHPSRLQTTDNLLPMSPEEFDEVSRIVGSVEFDSMNTV
↑
last amino acid of 84 kd

Figure 6

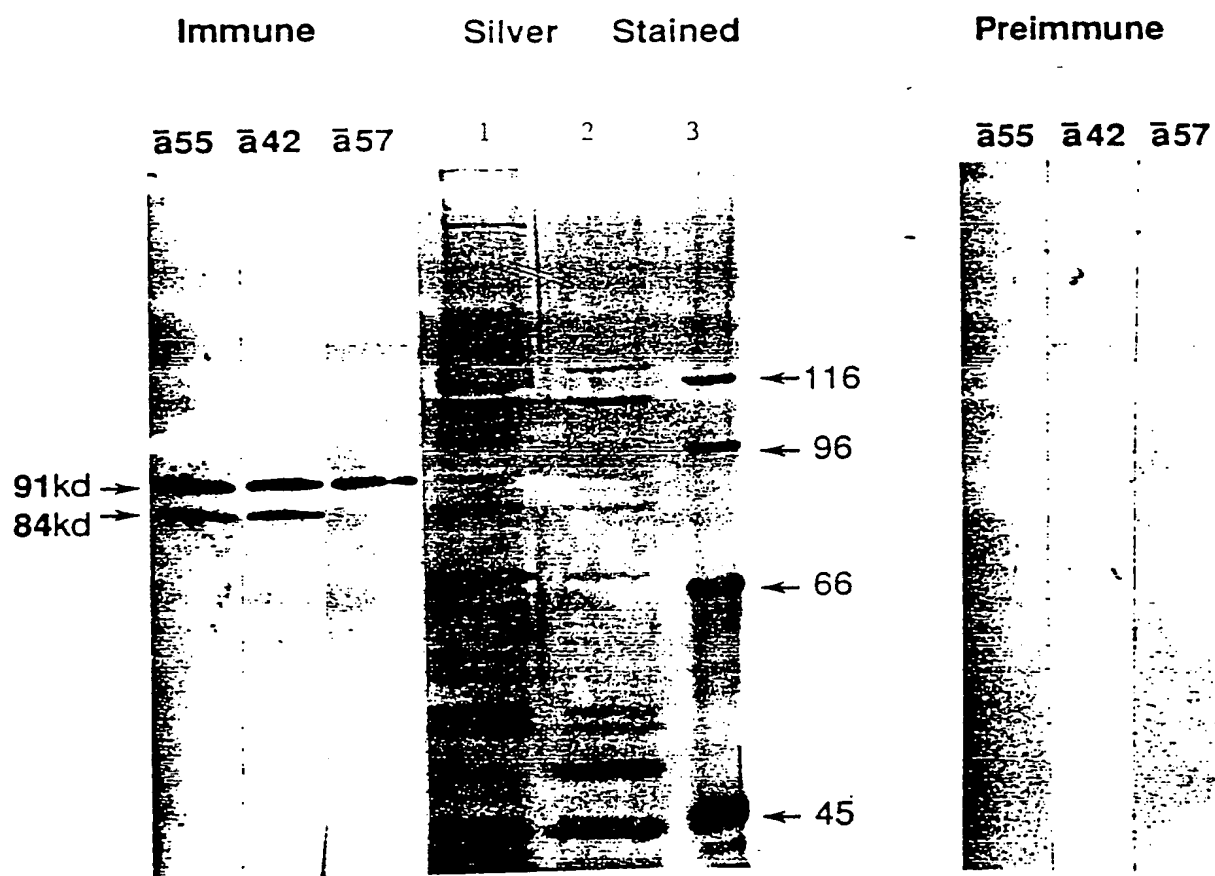


Figure 7A

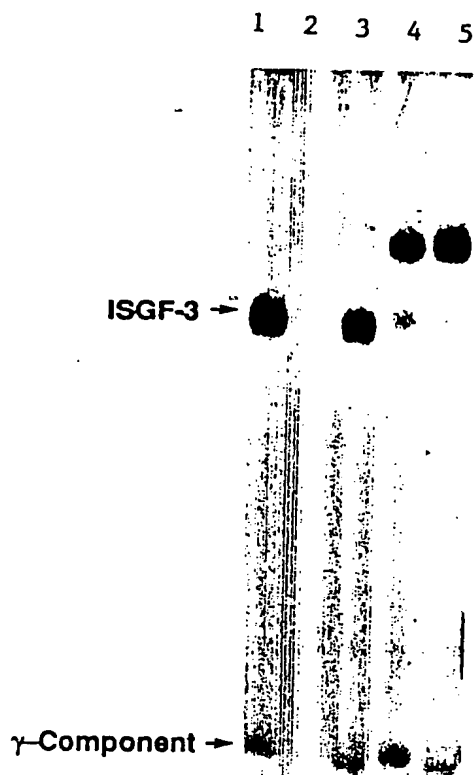


Figure 7B

1: MAQWEMLQNLDSPFQDQLHQLYSHSLLPVDIRQYLAVWIEDQNWQEAAALGSDDSKATMLF
61: FHFLDQLNYECGRCSQDPESLLLQHNLRKFCRDIQPFSSQDPTQLAEMIFNLLLEEKRII
121: QAQRAQLEQGEPVLET PVESQQHEIESRILDLRAMMEKLVKSISQ LKDQQDVFCFRYKIQ
181: A K G K T P S L D P H Q T K E Q K I L Q E T L N E L D K R R K E V L D A S K A L L G R L T T L I E L L L P K L E E W K A
241: Q Q Q K A C I R A P I D H G L E Q L E T W F T A G A K L L F H L R Q L L K E L K G L S C L V S Y Q D D P L T K G V D L R
301: N A Q V T E L L Q R L L H R A F V V E T Q P C M P Q T P H R P L I L K T G S K F T V R T R L L V R L Q E G N E S L T V E
361: V S I D R N P P Q L Q G F R K F N I L T S N Q K T L T P E K G Q S Q G L I W D F G Y L T L V E Q R S G G S G K G S N K G
421: P L G V T E E L H I I S F T V K Y T Y Q G L K Q E L K T D T L P V V I I S N M N Q L S I A W A S V L W F N L L S P N L Q
481: N Q Q F F S N P P K A P W S L L G P A L S W Q F S S Y V G R G L N S D Q L S M L R N K L F G Q N C R T E D P L L S W A D
541: F T K R E S P P G K L P F W T W L D K I L E L V H D H L K D L W N D G R I M G F V S R S Q E R R L L K K T M S G T F L L
601: R F S E S S E G G I T C S W V E H Q D D D K V L I Y S V Q P Y T K E V L Q S L P L T E I I R H Y O L L T E E N I P E N P
661: L R F L Y P R I P R D E A F G C Y Y Q E K V N L Q E R R K Y L K H R L I V V S N R Q V D E L Q Q P L E L K P E P E L S
721: L P L E L G L V P E P E L S L D L E P L L K A G L D L G P E L S V L E S T L E P V I E P T L C M V S Q T V P E P D Q G
781: P V S Q P V P E P D L P C D L R H L N T E P M E I F R N C V K I E E I M P N G D P L L A G Q N T V D E V Y V S R P S H F
841: Y T D G P L M P S D F

Figure 8 A

113 kDa MAQWEHLQNLDSPPQDQLHQLYSHSLIPVDIROYLAVMIEDQNMQEAALGSDDSKATHLF
 91/84 kDa MSQWYELQQLDSKFLQCVHQLNDDS-FPMETROYLAQWLEKQMEHAA--NDVSFATIRF

61 FHFLLQQLNYECGRCSQDPESLLQHNLRKFCRDICP-FSQDPTQLAEMIFNLLLEKRII
 57 HDLLSQLODDQYSTFSLE-NNFLLQHNTKSKRNLCQNEQEDFIQMSHIIYSCLNEERKIL

120 IQAQRQAQLEGGEPVLETPVESQCHIESRIOLDRAHHEKLVKSTISQLKDOQVFCFRYK-
 117 ENAQRFNAQCSGNIQSTVMLDKKQELDSKVRNVKDKVMCIENEIKSLLEDLODEYDFRCKT

179 IQAKGKTPS--LOPHQTKCKILQETLNEIDKRRKEVLDASKALLGRITITIE--LLLPK
 177 LQNRHEHETNGVAKSDQKQECOLLKKMYLMDKRRKEVVKHIEILLNVTEITQNAIINDE

235 ILEENKAQQKACIRAPIDHGLEQLIETWFTAGAKLLFHLRQLKELKGLSCLVSYQDDPLT
 236 IVEENKRRQGSACIGGEPNACLDQLQ-----QVRQGLKMLLEELQKYTVEHDEIT

295 RGVDLRNAQVTEILQRIILHRNFVVEITQPCMTPTPHRPLILKTGSKFTVTRLLVRLQEGN
 285 KKKQVLWDRFSLFQQLIQSSFVVERQPCMTTIPORPLVLKTGVQFTVKLRLLVRLQELN

355 ESITVEVSIQRNPPQ---LQGRKFNIILTSNQITLTPKQGSQGLIWDFGYITLVEQRSG
 345 YNLKVKVLFQKDVNERNTVKGRKFNIILGTITKVHNMEESTNGSLAAEFRLQLKEQKNA

412 GSGKGSNKGPLGVTEELHIIISFTVKYTYQGLKQELKTDITLPVVIIISMNQLSIAWASVLW
 405 GT--RTNEGPLIVTEELHISLSFETQLCQPGIVIDLETTSLPVVVISNVSQLP SGHASILW

472 FNLLSPNLQNOFFSNFRKAPMSLUGPALSWQFSSSYVGRGLNSDQLSMIRNKLFGQNCRT
 463 YNMLVAEPRNLSFFLTPTCARMAQLSEVLSWQFSSVTKRGLNVQQLNMLGEKILGPNASP

532 EDPILSWADFTKRESPPGKLPFWTMDKILELVHDHILKDLWNDGRIMGFVSRQERRLLK
 523 DG-LIPWTRFCKENINOKNEPFWLMIESILELIKILLPLWNDGCMGFISKERERALLK

592 KTHSGTFLLRFSSESS-EGGITCSWVEH-QDDDKVLIYSVQPYTKREVLSLPLTEIIRHYQ
 582 DQQPGTFLLRFSSESSREGAITFTWVERSONGGEPDFIIVPEPYTKKEISAVTFPDIIRNYK

650 LLTEENIPENPLRFLYPRIPRDEAFGCYY-----QEKVNLQERR--KMLKHRLIMVSHR
 642 VMAENIPENPLKYLYBNJOKDIAFGKYYSRPKEAPEPMEUDGPKGTGKIKTELISVSEV

702 QVDELQQPLELKP
 702 HPSRLQTTDNLLP

Figure 8B

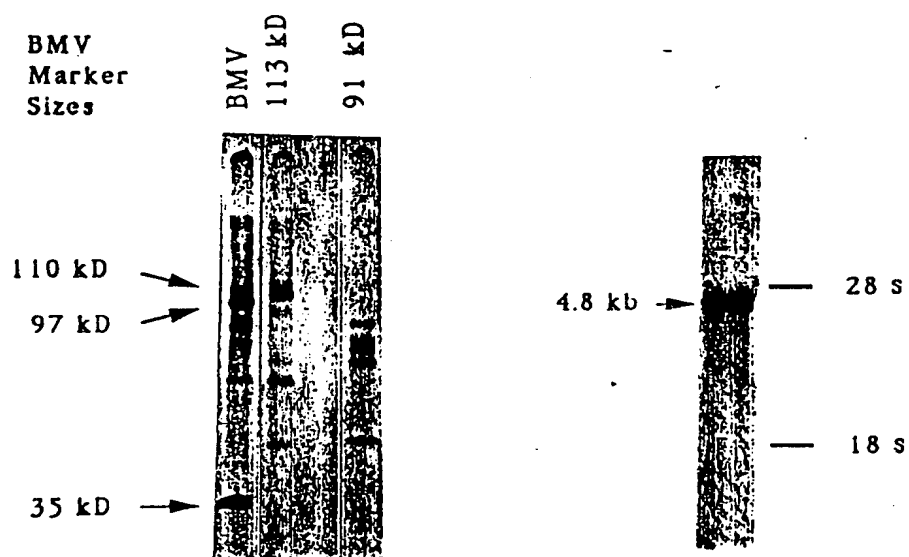


Figure 9

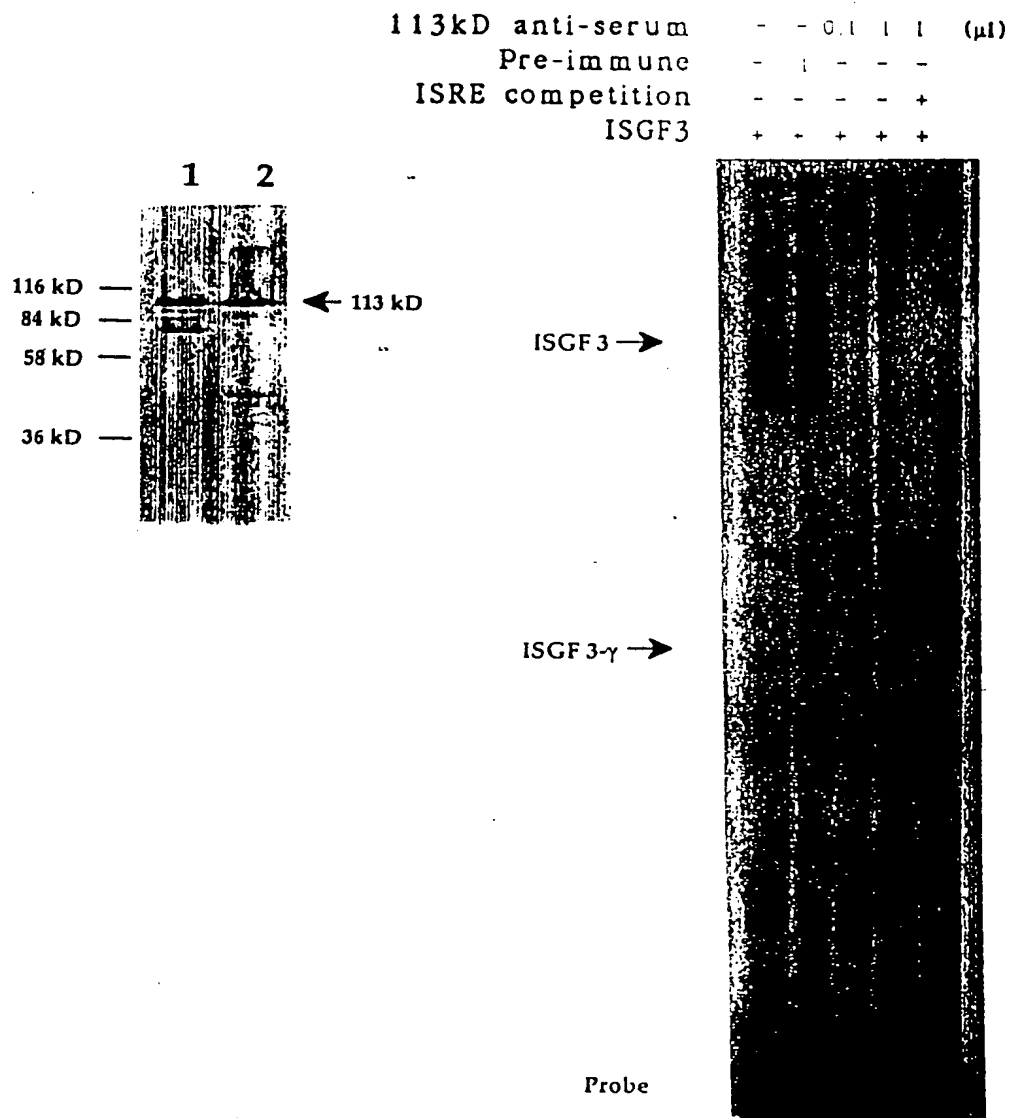


Figure 10

Figure 11

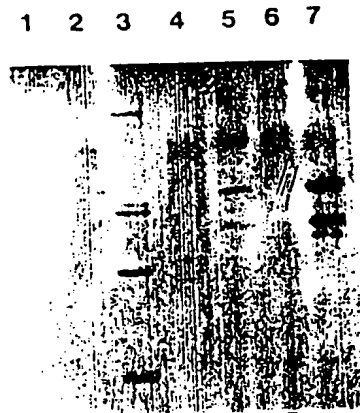


Figure 12

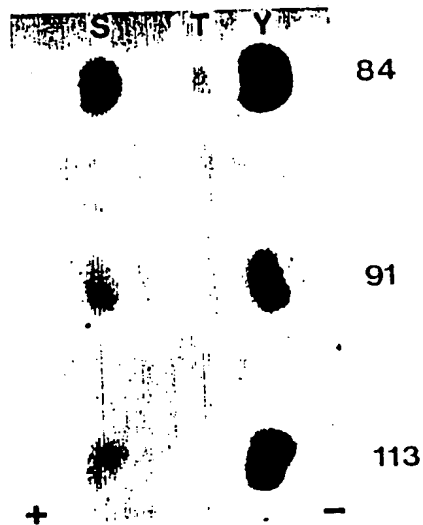


Figure 11, 12

1 MSQWFELQQL DSKFLEQVHQ LYDDSEPM EI RQYLAQWLEK QDWEHAAYDV
51 SFATIRFHDL LSQDDQYSR FSLENNFLLQ HNIKSKRNL QDNFQEDPVQ
101 MSMIIYNCLK EERKILENAQ RFNQAQEGNI QNTVMLDKQK ELDSKVRNVK
151 DQVMCIEQEI KTL EELQDEY DFKCKTSQNR EGEANGVAK9 DQKQEQLLLH
201 KMFLMLDNKR KEIIHKIREL LNSIELTQNT LINDELVEWK RRQSACIGG
251 PPNACLDQLQ TWFTIVAETL QQIRQQLKKL EELEQKFTYE PDPITKNKQV
301 LSDRTFLLFQ QLIQSSFFVE RQPCMPHPQ RPLVLKTGVQ FTVKSRLLVK
351 LQESNLLTKV KCHFDDKDVNE KNTVKGFRKF NILGHTHKVM NMEESTNGSL
401 AAELRHLQLK EQKNAGNRTN EGPLIVTEEL HSLSFETQLC QPGLVIDLET
451 TSLPVVVISN VSQLP SGWAS ILWYNMLVTE PRNLSFFLNP PCAWWSQLSE
501 VLSWQFSSVT KRGLNADQLS MLGEKLLGPN AGPDGLIPWT RFCKENINDK
551 NFEFWPWIDT ILELIKNDLL CLWNDGCIMG FISKE RERAL LKDQQPGTFL
601 LRFSESSREG AITFTWVERS QNGGEPDFHA VEPYTKKELS AVTFPDIIRN
651 YKVMAAENIP ENPLKYLYPN IDKDHAFGKY YSRPKEAPEP MELDDPKRTG
701 YIKTELISVS EVHPSRLQTT DNLLPMSPEE FDEMSRIVGP EFDSMMSTV

Figure 13A

1 caggatgtca cagtgggtcg agcttcagca gctggactcc aagttcctgg
51 agcagggtcca ccagctgtac gatgacagtt tccccatgga aatcagacag
101 tacctggccc agtggctgga aaagcaagac tgggagcacg ctgcctatga
151 tgtctcgttt gcgaccatcc gcttccatga cctcctctca cagctggacg
201 accagtacag ccgcttttct ctggagaata atttcttgtt gcagcacaac
251 atacggaaaa gcaagcgtaa tctccaggat aacttccaag aagatcccgt
301 acagatgtcc atgatcatct acaactgtct gaaggaagaa aggaagattt
351 tggaaaatgc ccaaagattt aatcaggccc aggagggaaa tattcagaac
401 actgtgatgt tagataaaca gaaggagctg gacagtaaa tcagaaatgt
451 gaaggatcaa gtcattgtca tagagcagga aatcaagacc ctagaagaat
501 tacaagatga atatgacttt aaatgcaaaa cctctcagaa cagagaaggt
551 gaagccaatg gtgtggcgaa gagcgaccaa aaacaggaa acgtgctgct
601 ccacaagatg tttttaatgc ttgacaataa gagaaaggag ataattcaca
651 aaatcagaga gttgctgaat tccatcgagc tcaactcagaa cactctgatt
701 aatgacgagc tcgtggagtg gaagcgaagg cagcagagcg cctgcacg
751 gggaccgccc aacgcctgcc tggatcagct gcaaacgtgg ttcaccattg
801 ttgcagagac cctgcagcag atccgtcagc agcttaaaaa gctggaggag
851 ttggaacaga aattcaccta tgagcccgac cctattacaa aaaacaagca
901 ggtgttgtca gatcgaacct tcctcctctt ccagcagctc attcagagct
951 ccttcgtggt agaacgacag ccgtgcatgc ccactcaccg gcagaggccc
1001 ctgggtcttga agactggggt acagttcact gtcaagtcga gactgttgg
1051 gaaattgcaa gagtcgaatc tattaacgaa agtgaaatgt cactttgaca
1101 aagatgtgaa cgagaaaaac acagttaaag gatttcggaa gttcaacatc
1151 ttgggtacgc acacaaaagt gatgaacatg gaagaatcca ccaacggaag
1201 tctggcagct gagctccgac acctgcaact gaaggaacag aaaaacgctg
1251 ggaacagaac taatgagggg cctctcattg tcaccgaaga acttcactct
1301 cttagctttg aaaccagtt gtgccagcca ggcttggatg ttgacctgga
1351 gaccacctct ctctctgtcg tggatgctc caacgtcagc cagctcccca

Figure 13B

1401 gtggctgggc gtctatcctg tggtaacaaca tgctgggtgac agagcccagg
1451 aatctctcct tcttcctgaa ccccccgtgc gcgtgggtggc ccagctctc
1501 agagggtgtg agttggcagt tttcatcagt caccaagaga ggtctgaacg
1551 cagaccagct gagcatgctg ggagagaagc tgctgggccc taatgctggc
1601 cctgatgggc ttattccatg gacaagggtt tgtaaggaaa atattaatga
1651 taaaaatttc tccttctggc cttggattga caccatccta gagctcatta
1701 agaacgacct gctgtgcctc tggaatgatg ggtgcattat gggcttcato
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1801 cctgcttaga ttcagtgaga gctcccggga agggggccatc acattcacat
1851 ggggtggaacg gtcccagaac ggaggtgaac ctgacttcca tgccgtggag
1901 ccctacacga aaaaagaact ttcagctgtt actttcccag atattattcg
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2001 atctgtaccc caatattgac aaagaccacg cctttgggaa gtattattcc
2051 agaccaaagg aagcaccaga accgatggag cttgacgacc ctaagcgaac
2101 tggatacatc aagactgagt tgatttctgt gtctgaagtc cacccttcta
2151 gacttcagac cacagacaac ctgcttccca tgtctccaga ggagtttgat
2201 gagatgtccc ggatagtggg ccccgaattt gacagtatga tgagcacagt
2251 ataaacacga atttctctct ggcgaca

Figure 13C

1 MSQWNQVQQL EIKFLEQVDQ FYDDNFPMEI RHLLAQWIET QDWEVASNNE
51 TMTATILLQNL LIQLDEQLGR VSKEKNLLLI HNLKRIRKVL QGKFHGNPMH
101 VAVVISNCLR EERRILAAAN MPIQGPLEKS LQSSSVSERQ RNVEHKVSAI
151 KNSVQMTEQD TKYLEDLQDE FDYRYKTIQT MDQGDKN SIL VNQEVLTLLQ
201 EMLNSLDFKR KEALSKMTQI VNETDLLMNS MLEELQDWK KRHRIACIGG
251 PLHNGLDQLQ NCF'TLLAESL FQLRQQLEKL QEQSTKMTYE GDPIPAQRAH
301 LLERATFLIY NLFKNSFVVE RHACMP'HPQ RPMVLKTLIQ FTVKLRLLIK
351 LPELNYQVKV KASIDKNVST LSNRRFVLCG THVKAMSSEE SSNGSLSVEL
401 DIATQGDEVQ YWSKGNEGCH MVTEELHSIT FETQICLYGL TINLETSSLP
451 VVMISNVSQL PNAWASIIWY NVSTNDSQNL VFFNNPPSVT LGQLLEVMSW
501 QFSSYVGRGL NSEQLNMLAE KLTVQSNYND GHLTWAKFCK EHLPGKTFTF
551 WTWLEAIDL IKKHILPLWI DGYIMGFVSK EKERLLLKDK MPGTFLLRFS
601 ESHLGGITFT WVDQSENGEV RFHSVEPYNK GRLSALAFAD ILRDYKVIMA
651 ENIPENPLKY LYPDIPKDKA FGKHYSSQPC EVSRPTERGD KGYVPSVFIP
701 ISTIRSDSTE PQSPDLLPM SPSAYAVLRE NLSPTTIETA MNSPYSAE

Figure 14A

1 tgccactacc tggacggaga gagagagagc agcatgtctc agtggaatca
51 agtccaacaa ttagaaatca agtttttga gcaagtagat cagttctatg
101 atgacaactt tcctatggaa atccggcatc tgctagctca gtggattgag
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351 aaattgctta aggaagaga ggagaatatt ggctgcagcc aacatgccta
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501 gacagaacaa gataccaaat acttagaaga cctgcaagat gagtttgact
551 acaggataaa aacaattcag acaatggatc aggtgacaa aaacagtatc
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651 ggacttcaag agaaaggaag cactcagtaa gatgacgcag atagtgaacg
701 agacagacct gctcatgaac agcatgcttc tagaagagct gcaggactgg
751 aaaaagcggc acaggattgc ctgcattggg ggcctgctcc acaatgggct
801 ggaccagctt cagaactgct ttaccctact ggcagagagt cttttccaac
851 tcagacagca actggagaaa ctacaggagc aatctactaa aatgacctat

Figure 14B

901 gaaggggatc ccatccctgc tcaaagagca cacctcctgg aaagagctac
951 cttcctgata tacaaccttt tcaagaactc atttgtggtc gagcgacacg
1001 catgcatgcc aacgcaccct cagaggccga tggacttaa aaccctcatt
1051 cagttcactg taaaactgag attactaata aaattgccgg aactaaacta
1101 tcaggtgaaa gtaaaggcgt ccattgacaa gaatgtttca actctaagca
1151 atagaagatt tgtgctttgt ggaactcacg tcaaagctat gtccagtga
1201 gaatcttcca atgggagcct ctcaagtggag ttagacattg caaccaagg
1251 agatgaagtg cagtactgga gtaaaggaaa cgagggctgc cacatggtga
1301 cagaggagtt gcattccata acctttgaga cccagatctg cctctatggc
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1401 tgtcagccaa ctacctaatg catgggcac ccatcttgg tacaatgtat
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1651 aaggaacatt tgcttgcaa aacatttacc ttctggactt ggcttgaagc
1701 aatattggac ctaattaaaa aacatattct tcccctctgg attgatgggt
1751 acatcatggg atttgttagt aaagagaagg aacggcttct gctcaaagat
1801 aaaatgcctg ggacattttt gttaagattc agtgagagcc atcttggagg

Figure 14C

1851 gataaccttc acctgggtgg accaatctga aaatggagaa gtgagattcc
1901 actctgtaga accctacaac aaaggagagac tgtcggctct ggccttcgct
1951 gacatcctgc gagactacaa gggtatcatg gctgaaaaca tccctgaaaa
2001 ccctctgaag tacctctacc ctgacattcc caaagacaaa gcctttggca
2051 aacactacag ctcccagccg tgcgaagtct caagaccaac cgaacgggga
2101 gacaagggtt acgtcccctc tgtttttatc cccatttcaa caatccgaag
2151 cgattccacg gagccacaat ctccctcaga ccttctcccc atgtctccaa
2201 gtgcatatgc tgtgctgaga gaaaacctga gcccaacgac aattgaaact
2251 gcaatgaatt ccccatattc tgctgaatga cggtgcaaac ggacacttta
2301 aagaaggaag cagatgaaac tggagagtgt tctttaccat agatcacaat
2351 ttattttcttc ggctttgtaa atacc

Figure 14D

1 MAQWNQLQQL DTRYLKQLHQ LYSDTFPMEL RQFLAPWIES QDWAYAASKE
51 SHATLVFHNH LGEIDQQYSR FLQESNVLYQ HNLRRIKQFL QSRYLEKPME
101 IARIVARCLW EESRLLQTAA TAAQQGGQAN HPTAAVVTEK QQMLEQHLQD
151 VRKRVQDLEQ KMKVVENLQD DFDENYKTLK SQGDMQDLNG NNQSVTRQKM
201 QQLEQMLTAL DQMRRSIVSE LAGLLSAMEY VQKTLTDEEL ADWKRRPEIA
251 CIGGPPNICL DRLENWITSL AESQLQTRQQ IKKLEELQOK VSYKGDPIVO
301 HRPMLEERIV ELFRNLKMSA FVVERQPCMP MHPDRPLVIK TGVQFTTKVR
351 LLVKFPELNY QLKIKVCIDK DSGDVAALRG SRKFNILGTN TKVMNMEESN
401 NGSLSAEFKH LTLREQRCGN GGRANCASL IVTEELHLIT FETEVYHQGL
451 KIDLETHSLP VVVISNICQM PNAWASILWY NMLTNNPKNV NFFTKPPIGT
501 WDQVAEVLWS QFSSTTKRGL SIEQLTTLAE KLLGPGVNYS GCQITWAKFC
551 KENMAGKGF'S FWVWLDNIID LVKKYILALW NEGYIMGFIS KERERAILST
601 KPPGTFLLEF SESSKEGGVT FTWVEKDISG KTQIQSVEPY TKQQLNNMSF
651 AEIIMGYKIM DATNILVSPL VYLYPDIPKE EAFGKYCRPE SQEHPEADPG
701 SAAPYLKTKF ICVTPTTCSN TIDLPMSPRT LDSLMQFGNN GEGAEPSAGG
751 QFESLTFDMD LTSECATSPM

Figure 15A

1 gccgcgacca gccaggccgg ccagtcgggc tcagcccga gacagtcgag
51 acccctgact gcagcaggat ggctcagtgg aaccagctgc agcagctgga
101 cacacgctac ctgaagcagc tgcaccagct gtacagcgac acgttcccca
151 tggagctgcg gcagttcctg gcaccttggg ttgagagtca agactgggca
201 tatgcagcca gcaaagagtc acatgccacg ttggtgtttc ataattcttt
251 gggtgaaatt gaccagcaat atagccgatt cctgcaagag tccaatgtcc
301 tctatcagca caaccttoga agaataaagc agtttctgca gagcaggtat
351 cttgagaagc caatggaaat tgcccggatc gtggcccgat gcctgtggga
401 agagtctcgc ctctccaga cggcagccac ggcagcccag caagggggcc
451 aggccaacca cccaacagcc gccgtagtga cagaagaagca gcagatgttg
501 gagcagcatc ttcaggatgt ccggaagcga gtgcaggatc tagaacagaa
551 aatgaaggtg gtggagaacc tccaggacga ctttgatttc aactacaaaa
601 ccctcaagag ccaaggagac atgcaggatc tgaatggaaa caaccagtct
651 gtgaccagac agaagatgca gcagctggaa cagatgctca cagccctgga
701 ccagatgcgg agaagcattg tgagttagct ggcggggctc ttgtcagcaa
751 tggagtacgt gcagaagaca ctgactgatg aagagctggc tgactggaag
801 aggcggccag agatcgcgtg catcgaggc cctcccaaca tctgcctgga
851 ccgtctggaa aactggataa cttcattagc agaattctaa cttcagacct

Figure 15B

901 gccacaaat taagaaactg gaggagctgc agcagaaagt gtcctacaag
951 ggcgacccta tcgtgcagca ccggcccatg ctggaggaga ggatcgtgga
1001 gctgttcaga aacttaatga agagtgcctt cgtggtggag cggcagccct
1051 gcatgcccat gcaccggac cggcccttag tcatcaagac tgggtgccag
1101 tttaccacga aagtcagggt gctggtcaaa tttcctgagt tgaattatca
1151 gcttaaaatt aaagtgtgca ttgataaaga ctctggggat gttgctgcc
1201 tcagagggtc tcggaaattt aacattctgg gcacgaacac aaaagtgatg
1251 aacatggagg agtctaacaa cggcagcctg tctgcagagt tcaagcacct
1301 gacccttagg gagcagagat gtgggaatgg aggccgtgcc aattgtgatg
1351 cctccttgat cgtgactgag gagctgcacc tgatcacctt cgagactgag
1401 gtgtaccacc aaggcctcaa gattgaccta gagaccact ccttgccagt
1451 tgtggtgatc tccaacatct gtcagatgcc aaatgcttgg gcatcaatcc
1501 tgtggtataa catgctgacc aataaccca agaacgtgaa cttcttcact
1551 aagccgcaa ttggaacctg ggaccaagtg gccgaggtgc tcagctggca
1601 gttctcgtcc accaccaagc gagggtgag catcgagcag ctgacaacgc
1651 tggctgagaa gtcctaggg cctggtgtga actactcagg gtgtcagatc
1701 acatgggcta aattctgcaa agaaaacatg gctggcaagg gcttctcctt
1751 ctgggtctgg ctagacaata tcatcgacct tgtgaaaag tatatcttgg
1801 ccctttggaa tgaagggtac atcatgggtt tcatcagcaa ggagcgggag

Figure 15C

1851 cgggccatcc taagcacaaa gcccccgggc accttcctac tgcgcttcag
1901 cgagagcagc aaagaaggag gggtcacttt cacttgggtg gaaaaggaca
1951 tcagtggcaa gaccagatc cagtctgtag agccatacac caagcagcag
2001 ctgaacaaca tgtcatttgc tgaaatcatc atgggctata agatcatgga
2051 tgcgaccaac atcctggtgt ctccacttgt ctacctctac cccgacattc
2101 ccaaggagga ggcatttgga aagtactgta ggcccgagag ccaggagcac
2151 cccgaagccg acccaggtag tgctgccccg tacctgaaga ccaagttcat
2201 ctgtgtgaca ccaacgacct gcagcaatac cattgacctg ccgatgtccc
2251 cccgcacttt agattcattg atgcagtttg gaaataacgg tgaagggtgct
2301 gagccctcag caggagggca gtttgagtcg ctcacgtttg acatggatct
2351 gacctcggag tgtgctacct ccccatgtg aggagctgaa accagaagct
2401 gcagagacgt gacttgagac acctgccccg tgctccaccc ctaagcagcc
2451 gaaccccata tcgtctgaaa ctcttaactt tgtgggtcca gatttttttt
2501 ttttaatttcc tacttctgct atctttgggc aatctgggca ctttttaaaa
2551 gagagaaatg agtgagtgtg ggtgataaac tgttatgtaa agaggagaga
2601 cctctgagtc tggggatggg gctgagagca gaaggaggcc aaaggggaac
2651 acctcctgtc ctgcccgcct gccctccttt ttcagcagct cggggggttg
2701 ttgttagaca agtgccctct ggtgcccatg gctacctgtt gccccactct
2751 gtgagctgat accccattct gggaaactct ggctctgcac tttcaacctt

Figure 15D

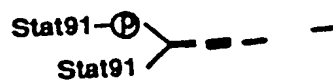
2801 gctaatatcc acatagaagc taggactaag cccaggaggt tcctctttaa

2851 attaaaaaaaa aaaaaaaaaa

Figure 15E

A

Ext
Flow
A_{0.2}
A_{0.8}



B

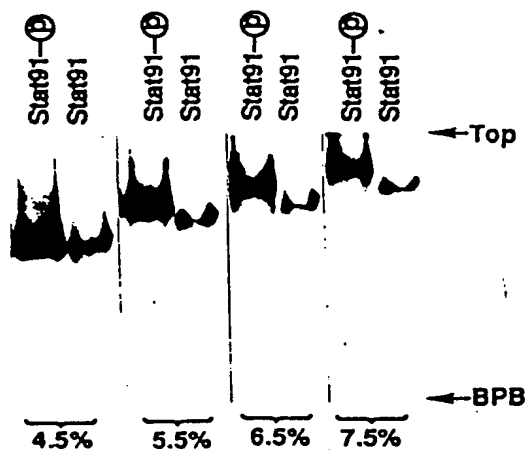


Figure 16A, B

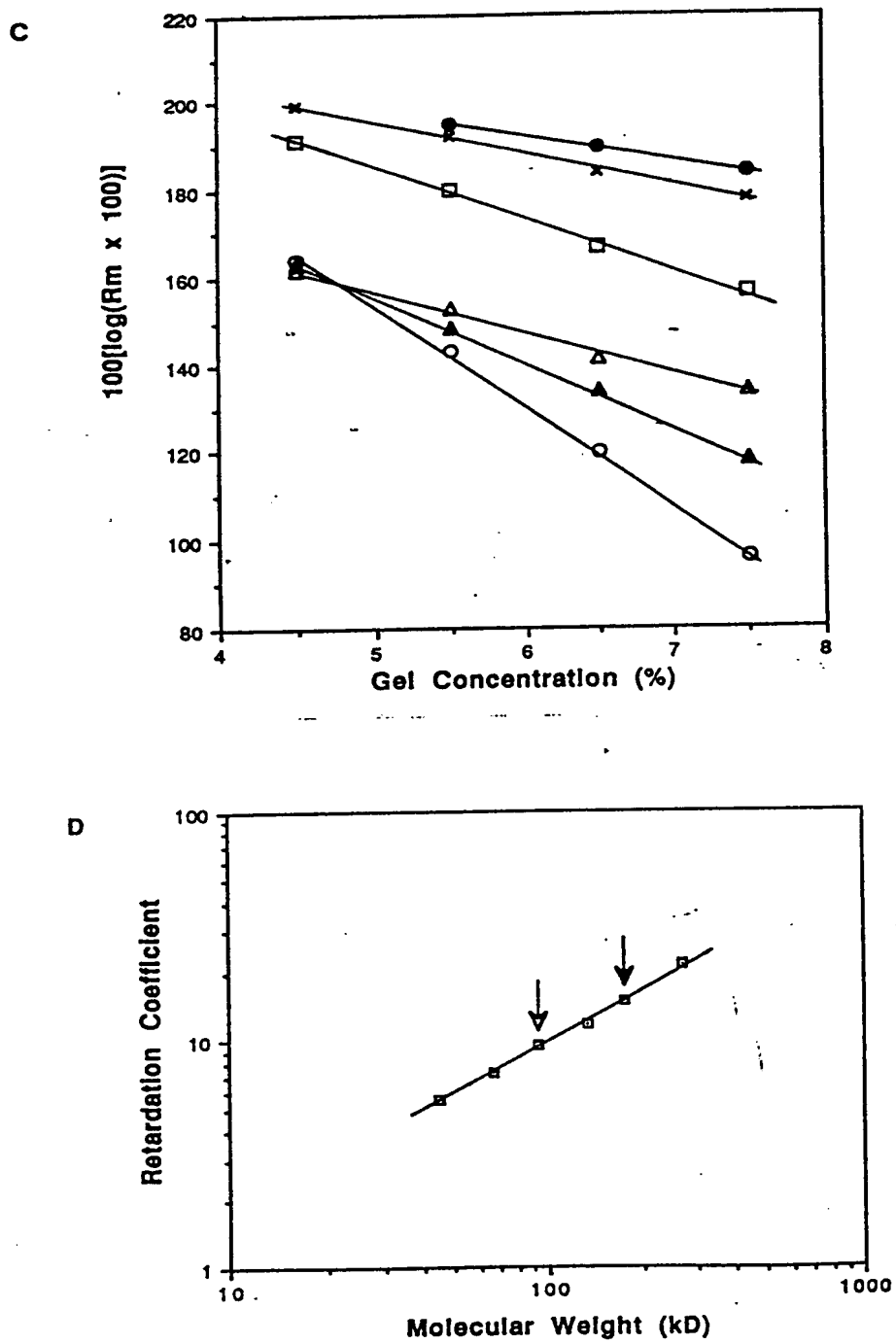


Figure 16C,D

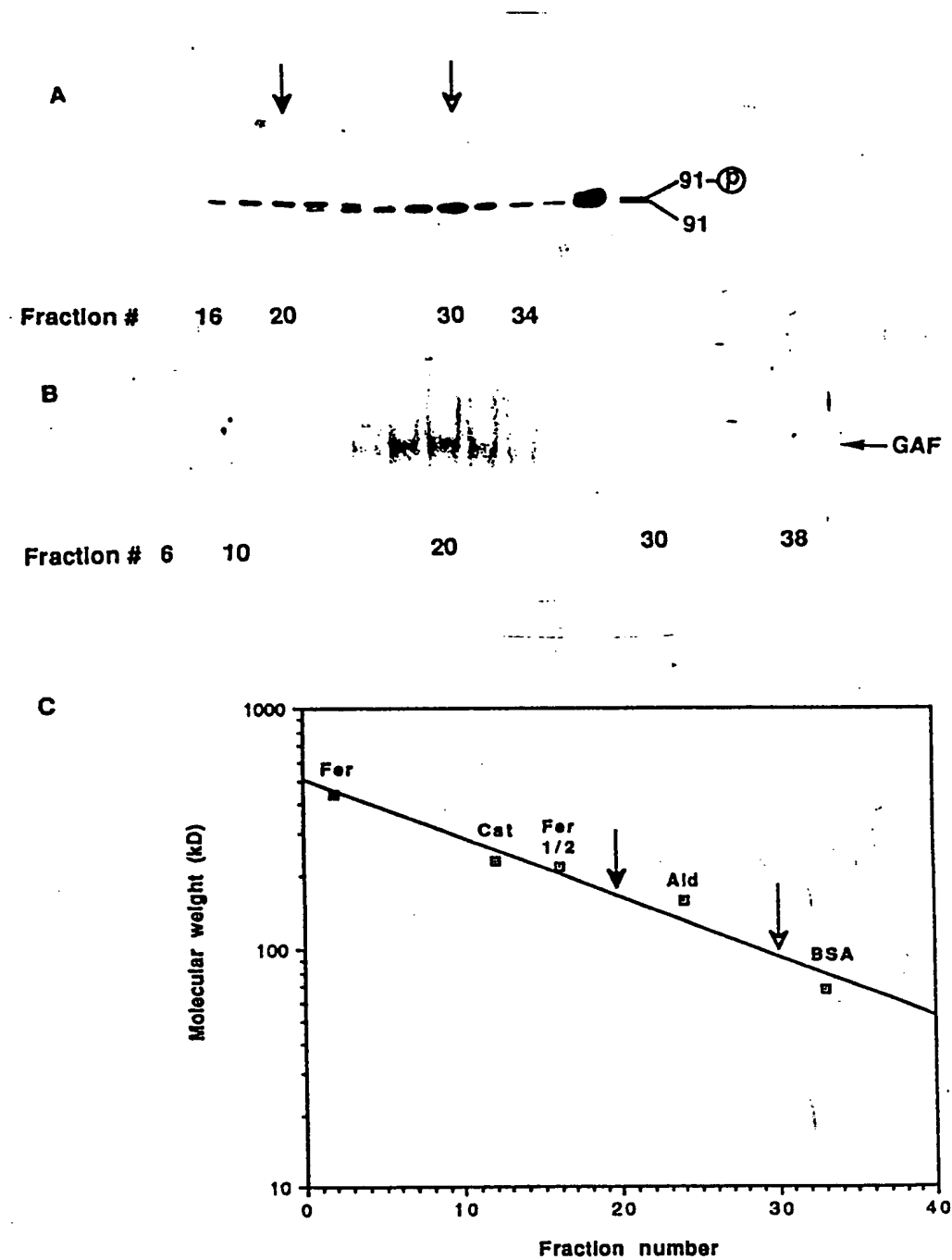


Figure 17

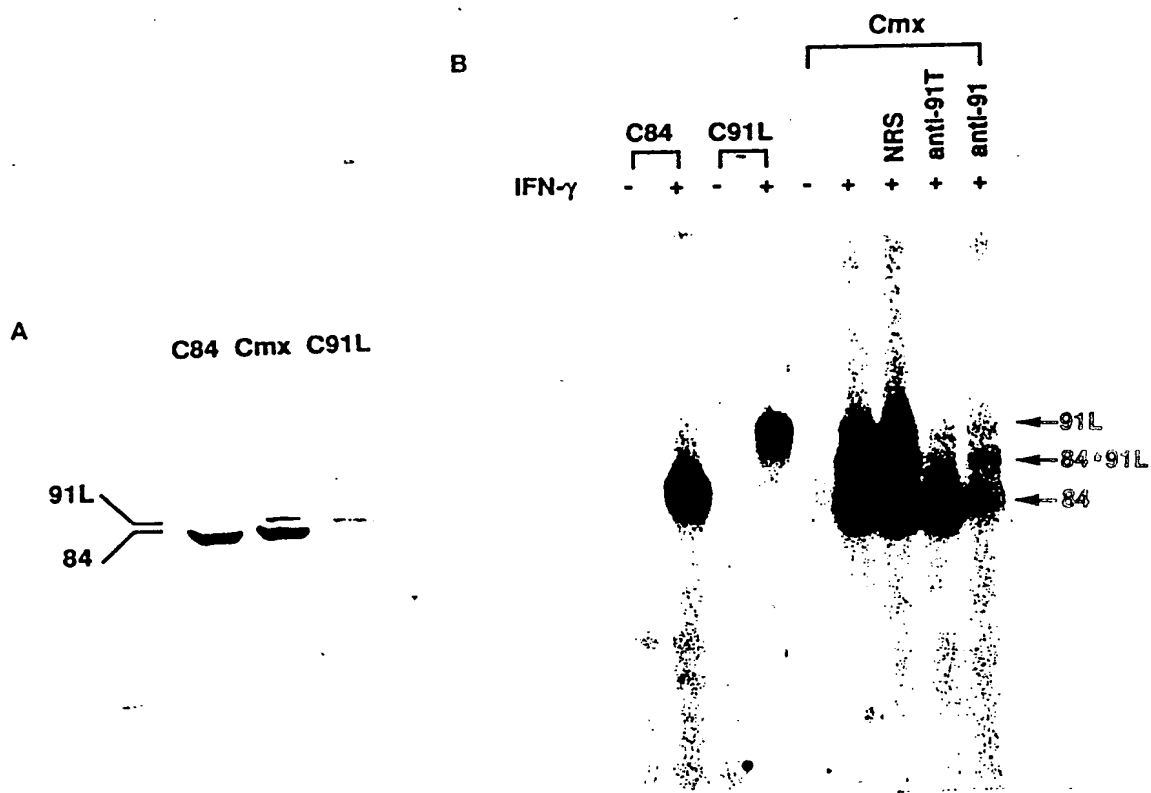


Figure 18

Figure 19

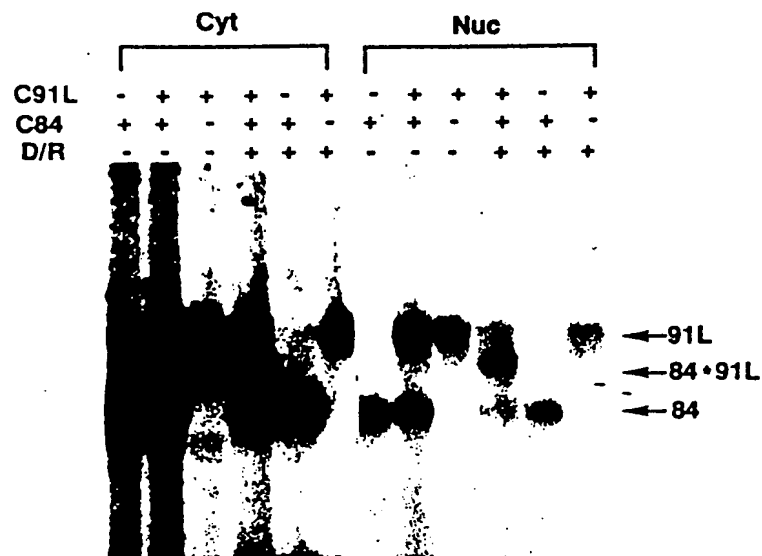


Figure 20

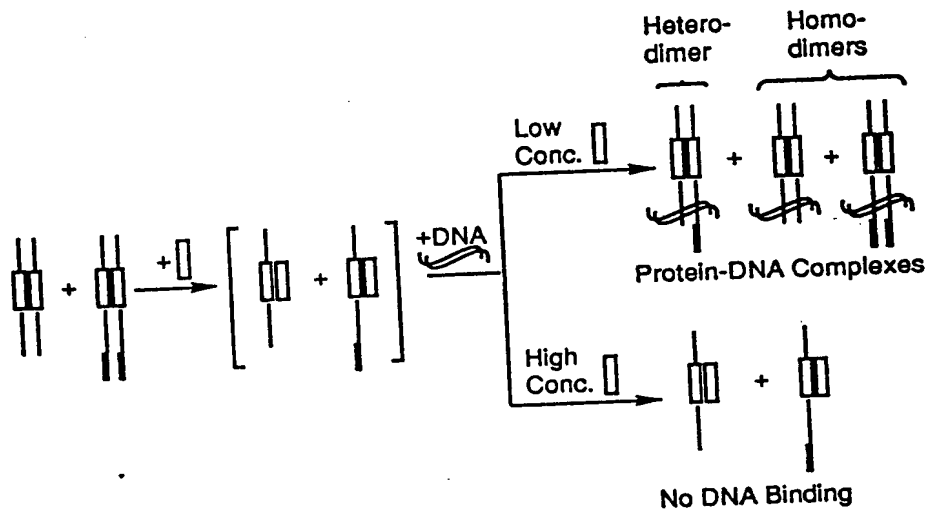


Figure 19, 20

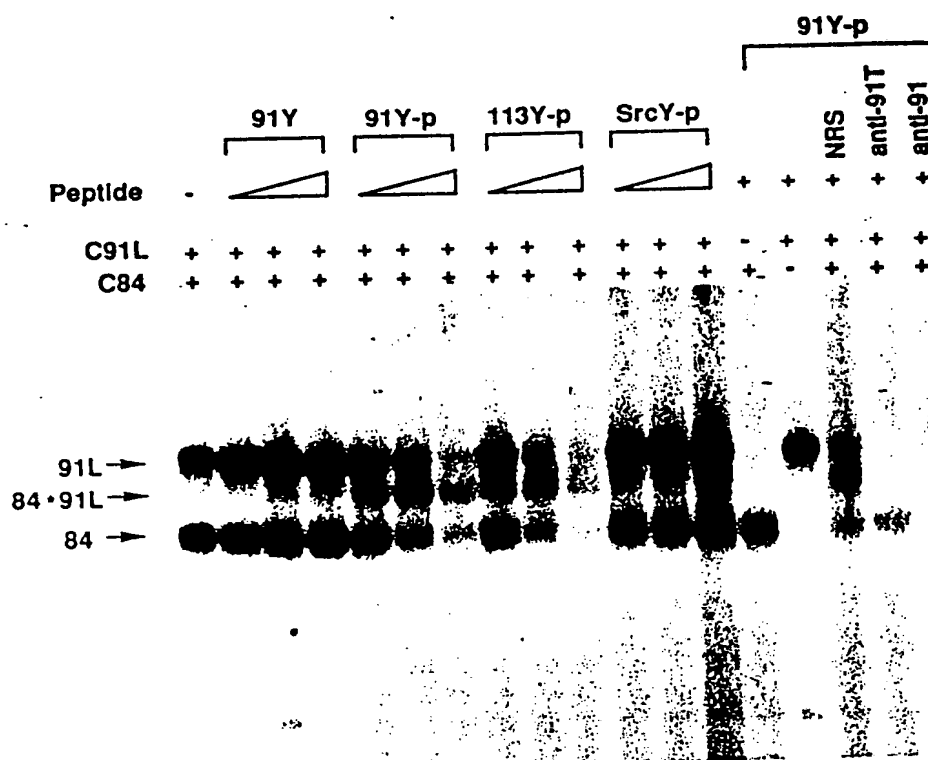


Figure 21

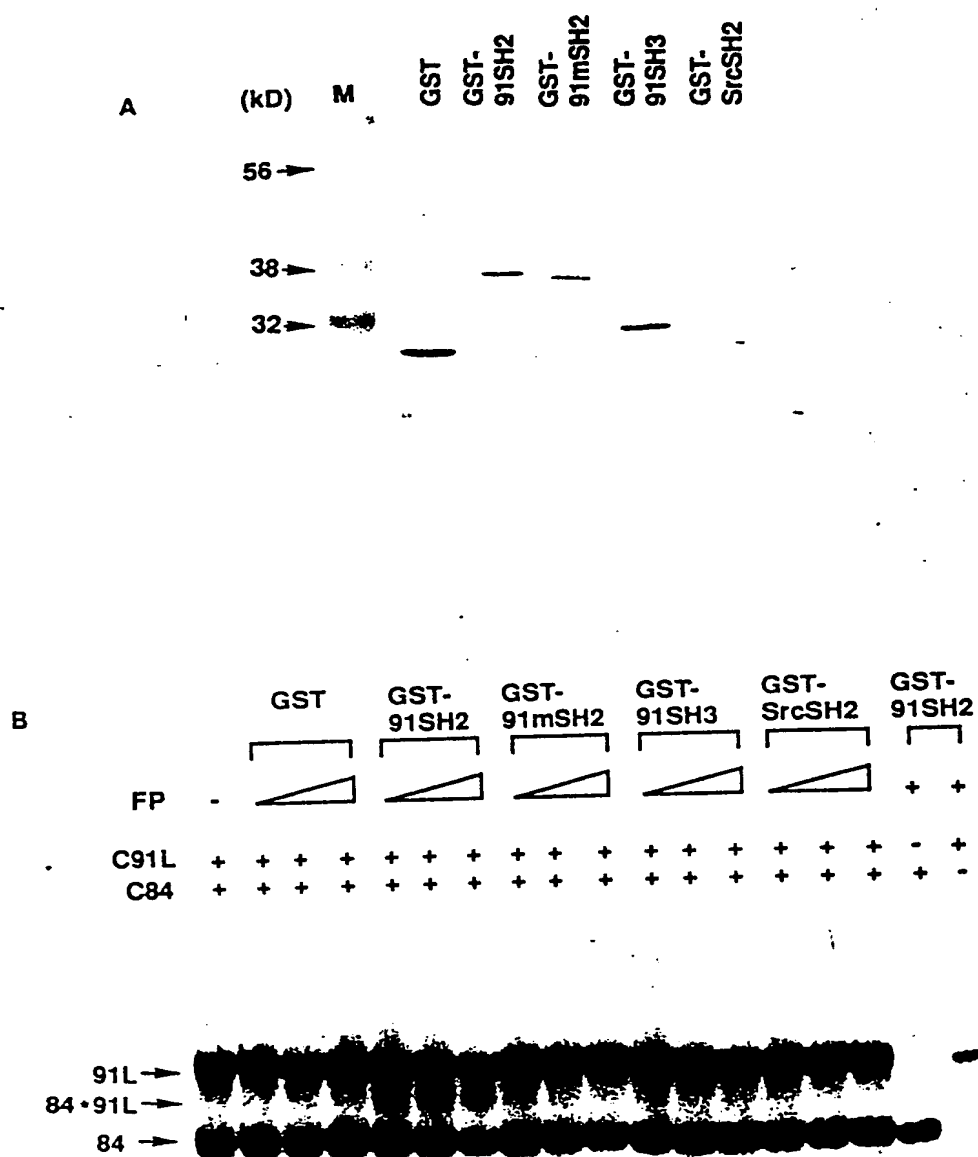


Figure 22

		$\beta A1$		$\alpha A2$		$\beta B5$	
stat91	(569)	LLPL	WND	GRCIMGFI	SKERERALLK	DQOP	G TFLLRFS ESSRE G AITFWVER (619)
src	(145)	AEE	WYF	GKI	TRRESERLLL	NPENPRG	TFLVRES ETTK G AYCLSVSD (188)
lck	(127)		WFF	KNL	SRKDAERQLL	APGNTHG	SFLIRES ESTA G SFSLSVRD (168)
abl	(141)	EKHS	WYH	GPV	SRNAAEYLLS	SGIN	G SFLVRES DRRP G QRSISLRY (184)
p85 α N	(330)	QDAE	WYW	GDI	SREEVNEKLR	DTAD	G TFLVRDA STRMH G DYTTLTRK (374)

SCR'S		XXX		XXXXXXXXXX		XXXXX	XXX	XXXXXX
Name		[--] [-] [-----]		[-----] [-----]		[-----] [-----]	[-----] [-----]	[-----]
		NA βA AA		αA AB		βB BC		βC

				$\beta D6$	
stat91	(620)	S	QN	GGEPDFHAVEPYTKKELSAVTFF	IIRNYKV MAA ENIPENPL (664)
				D	
src	(189)	F	FD	NAR GL	NVKHYKI RKLDS G (210)
lck	(169)	D	FD	QNG GE	VVKHYKI RNLDN G (189)
abl	(185)	E	E	G	RVYHYRI NTA SD G (200)
p85 α N	(375)			GG	NNKLIKI FHR D G (388)

SCR'S		XXXXXXXXX X		X
Name		[-----] [-----] [-----]		[-----]
		CD		βD $\beta D'$ DE

				$\alpha B9$	
stat91	(665)	KYLY	P	NID X	KDHAFGKYYSRP PK EA PEP M ELD GPKGTGYIKT (704)
src	(211)	GFYI	TSR	TQF S	SLQQLVAYYSKH AD GL CH RLT NVC PTS (248)
lck	(190)	GFYI	SPR	ITF P	GLHDLVRHYTNA SD GL CT RLS RPC QTQ (227)
abl	(201)	KLYV	SSE	SRF N	TLAELVHHHSTV AD GL IT TLH YPA PKR (238)
p85 α N	(389)	KYGF	SDP	LTF N	SVVELINHYRHE S LA QYN PKLDV KL LYP (427)

SCR'S		XXX		XXXXXXXXXX		
Name		[--] [-] [-]		[-----] [-----]		[--] [-]
		βE EF βF		αB BG		βG GQ

Figure 23